



The Heterodyne

**Bulletin of the West Valley Amateur Radio Association
An Affiliated Club of the American Radio Relay League**

**West Valley Amateur Radio Association, W6PIY — <http://www.wvara.org>
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May 2009

Next Meeting: Wednesday, 7 to 9 p.m., May 20, 2009 at the American Red Cross, 2731 North First Street at Plumeria (between Trimble and Montague Expressway) in San José.
Speaker: To be determined — **Subject:** "Field Day Preparations, Part One"

ARRL Field Day 2009 — Get ready for the official 2009 ARRL Field Day. The web page is up and running at <http://www.arrl.org/FieldDay>. This page includes a summary of available resources, with links to Field Day forms and rules, logos and reference links. The page also includes a quick link to the map-based Field Day station locator where users can search for public Field Day sites. This year, Field Day is June 27-28. The Field Day page also includes a link for ordering commemorative Field Day T-shirts, hats, pins and other supplies. All of the items are available for ordering now; many of the items are already in stock. Radio clubs are encouraged to order early.

Field Day Is Coming! — by Jim Peterson, K6EI

Mark your calendars. For WVARA, Field Day this year is going to be June 26-28. Six of us went to Mora Hill a couple weekends ago for a "kick-the-tires" visit and worked out some tentative plans for antenna and tent placement. This year's Mora Hill Field Day operation will be in the 9A battery category. WVARA already holds the ARRL's all-time world-record for 9A battery (at 9,190 points, set in 2006), but we would like to raise our record's score even higher. We are looking for a satellite communications enthusiast to head up our Field Day satellite station. Please spread the word. Our Mora Hill operation is now officially listed on the cool interactive map on the ARRL's Field Day Locator web site. If you're curious where the other local clubs will be located, check it out: <http://www.arrl.org/contests/announcements/fd/locator.php>

Members of our Field Day team have expressed interest in a couple of different alternatives as far as this year's Field Day call sign.

1. One option is to use the callsign of longtime WVARA member and recent silent key, Marc Ziegler (W6ZZZ), as our Field Day site's primary call, with the GOTA station using W6PIY.

2. The second option would be to use a shorter 1x2 call sign belonging to one of our team members (such as K6KV or N6GD) as our primary call sign, with the call sign W6ZZZ used by our GOTA station.

In order to ensure that every member of our Field Day team is represented in this decision, we have set up a website where each can cast their vote:

http://www.surveymonkey.com/s.aspx?sm=EOcpw8Ug1c6aYidR_2bZi_2f6Q_3d_3d

If you are going to be participating in WVARA's Field Day event (either as an operator or as a member of the site's set-up/teardown crew), feel free to go to the above URL and vote your preference for our site's primary and GOTA call signs.

The station roster includes:

Entry Number	Band(s)/Freq.(s)	Mode	Station Number	Captain
1	HF	Digital		Phil Verinsky
2	HF	SSB	1	Scott Emery
3	HF	SSB	2	Jon Griffiths
4	HF	CW	1	Jim Peterson
5	HF	CW	2	Jim Peterson
6	HF	CW	3	Gary Gordon
7	10M	Choice		Tom Dunbar
Free	GOTA	Choice		Grant Willner
8	6M	Choice		Tom Dunbar
Free	2M	Choice		Tom Dunbar
9	220/440/1.2	Choice		Tom Dunbar
Free	TBD	Satellite		TBD

Progress in Obtaining W6ZZZ Call Sign for WVARA— by Chuck Kamas, AD6CL

As of April 21, 2009: Marc's call, W6ZZZ, has been canceled. A new club call sign, KI6YOE, has been applied for and received. The final step is applying for W6ZZZ as a vanity call sign, and to secure it as a replacement for KI6YOE. To facilitate securing W6ZZZ for WVARA, AD6CL has assumed the position of repeater trustee.

Memorial Service for Marc Ziegler, W6ZZZ — A memorial service for Marc Ziegler, W6ZZZ, will be held on Saturday, May 16th, 1 p.m. at the Loma Redwood Amphitheater & Gazebo, 23845 Summit Road, Los Gatos. Refreshments will be served after the service. The facility is part of the Loma Prieta School Campus. The Redwood Amphitheater is an outdoor facility located in a redwood grove. Marc was active in contesting, and a member of a number of ham groups, among them the Loma Prieta ARES and Loma Prieta Amateur Radio Club, of which he was secretary. For more information, please feel free to call Sue Pierce at 408-353-2832.

Directions:

From Highway 17:

1. Exit at Summit Road (coming from south-bound 17, take the overpass to get on the east side).
2. Drive east about 2.5 miles.
3. The Amphitheater & Gazebo are located on the left side of the road.

From Soquel-San Jose Road:

1. Take the Soquel-San Jose Road to its end at Summit Road.
2. Turn left on Summit Road.
3. Drive west for about 1.5 miles. The Amphitheater & Gazebo will be on the right.

Our April 15 Meeting— It was Income Tax Filing Day, and also the night of WVARA's monthly meeting. Speaker and program information were not finalized until after *The Heterodyne* was composed and posted to the club web site. For the record:

- Grant Willner, AD6RE spoke about his presentation to two yacht clubs in Redwood City about the use of amateur radio in maritime emergency communications.
- Gary Gordon, K6KV explained the theory and operation of an HF antenna triplexer that he designed for use in this year's WVARA Field Day activities. He passed the hardware box around for all members to have a hands-on experience!
- Jim Peterson, K6EI expressed his expectations for WVARA's Field Day participation this year, and mentioned the organization of a WVARA Field Day preparations group to do a walk-through of the Mora Hill site by the latter part of May and to make final decisions about equipment, antennas, power sources, and other essential considerations.

WVARA Tuesday Night Net Check-ins — X = checked in; # = net control.

Call Sign	Name	Apr. 7, 2009	Apr. 14, 2009	Apr. 21, 2009	Apr. 28, 2009	May 5, 2009
AB6XS	Kevin	X	X		X	
AD6YU	Loren	X	X #	X		X
K1DOD	Jonathan					X
K6QFO	Mike	X				X
K6WAR	Bill	X		X	X	X
KD6VOR	Marv				X	
KF6EMB	Svend		X	X		
KF6UTE	Casey	X	X	X	X	X
KK6VF	Kevin	X #		X #	X #	X #
N6BIH	Senad				X	
N6IPS	Roy	X				X
NU6P	John	X		X	X	
W6HOC	Howard	X		X		
W6TQG	Phil		X		X	
WB6KHP	Dave	X		X	X	X

Club Net: Tuesday, 8:30 p.m. on our club repeaters:

WVARA Repeaters (W6PIY)			
Band	MHz	PL	Status
6 Meters	52.580-	151.4 Hz	Operating
2 Meters	147.39+	151.4 Hz	Operating
1.25 Meters	223.96-	156.7 Hz	Operating
0.70 Meter	441.35+	88.5 Hz	Operating
0.23 Meter	1286.2-	100 Hz	Operating

Maker Faire, San Carlos, CA, May 30– 31 — Michael Pechner, KI6QNZ, is leading the ham radio demonstration at Maker Faire 2009, May 30-31, in San Mateo. The event is sponsored by numerous local Ham organizations. See <http://makerfaire.com> and http://groups.yahoo.com/group/maker_faire_hams/.

California Teen Is 2009 Goldfarb Scholarship Recipient —

In April, the ARRL Foundation board of directors <http://www.arrlf.org> voted unanimously to award the prestigious William R. Goldfarb Memorial Scholarship to Dean LaBarba, K16CUX, of Long Beach, California. LaBarba will graduate from Woodrow Wilson High School this year with a GPA of 4.0. According to ARRL Chief Development Officer Mary Hobart, K1MMH, upon graduation, LaBarba will more than meet the course requirements with 50 hours of honors and Advanced Placement credits.

LaBarba holds a Technician class license that in 2005 led him to participation in the Amateur Radio Emergency Communication (AREC) team at his high school; since 2007, he has served as president. The mobile amateur radio station at Wilson High School is the only high school emergency team in Long Beach. Hobart said that LaBarba took the "extra initiative" to display and demonstrate the mobile radio station at the district science fair, explaining to the public the role that amateur radio plays in community safety. LaBarba also spends considerable time coordinating amateur radio activities, including Field Day, with the local community.

In addition to his amateur radio activities, LaBarba is active in the Symphony and Symphonic Orchestra where he is seated as principal trombone. He also participates in the school speech and debate team. From an early age, LaBarba — who will be attending Westmont College <http://www.westmont.edu/> in Santa Barbara, California — has had a keen interest in medicine and intends to pursue a career in neurology.

The Goldfarb Scholarship is the result of a generous endowment from the late William Goldfarb, N2ITP. Before his death in 1997, Goldfarb set up a scholarship endowment of close to \$1 million in memory of his parents, Albert and Dorothy Goldfarb. Awarded to one high school senior each year, the Goldfarb Scholarship assists the recipient to receive a four-year undergraduate degree in engineering or science or in the medical or business-related fields. The terms of reference of the generous Goldfarb scholarship award require that recipients demonstrate financial need and significant involvement with amateur radio, in addition to high academic performance. The seventh Goldfarb Scholarship winner, LaBarba continues the tradition of prior recipients, demonstrating superior academic performance, outstanding leadership and extraordinary amateur radio and community service.

More information on the Goldfarb Scholarship is available on the ARRL Web site <http://www.arrl.org/arrlf/>. Applications for the Goldfarb Scholarship and other ARRL Foundation Scholarships are accepted each year beginning October 1 and ending February 1 for the academic year that starts the following August/September.

Swap Meets —

Livermore SWAP
Robertson Park, Livermore
1st Sunday of the month, March through November

Information at: <http://www.livermoreark.org/swap/swap.html>
Flyer at: <http://www.livermoreark.org/swap/swapbrochure.pdf>

ASVARO Electronics Flea Market
De Anza College, Cupertino
2nd Saturday of the month, March through October

Information at: <http://www.electronicSFleaMarket.com/>
Flyer at: <http://www.electronicSFleaMarket.com/efm-flyer.pdf>

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ICQ Amateur/Ham Radio Podcast— Launched in July 2008, the ICQ Amateur/Ham Radio Podcast provides a mixture of news, views, training, technical reviews and information for all levels around the world. April 2009 marked the ICQ Podcast's 21st episode.

Previous episodes have included roundtable discussions with new entrants to the hobby and seasoned pros discussing the hobby. Technical reviews have covered many topics including antennas, equipment modifications, product reviews, and interviews with hams discussing their latest innovations.

The ICQ Amateur/Ham Radio Podcast is a fortnightly radio-type show, downloadable from the internet. Episodes can either be downloaded direct from the website [http:// www.icqpodcast.com](http://www.icqpodcast.com) or by subscribing to iTunes <http://phobos.apple.com/WebObjects/MZStore.woa/wa/viewPodcast?id=284922000> . By registering with the ICQ Podcast web site, an e-mail will be sent to you with a direct link to download the latest episodes. Episodes can be played back either from the computer or by loading the MP3 file onto an MP3 player.

The ICQ Podcast is a podcast "for amateurs by amateurs" and would be very interested to hear for anyone who would like to be involved. If you would like to contact the group, please send e-mail to info@icqpodcast.com .

FCC Affirms Vanity Call Sign Rules— The FCC dismissed a petition filed by Richard Essen, N6CX (ex-AB3IQ), of Silver Spring, Maryland, regarding the issuance of a vanity call sign to Allan Corderman http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA_-09-997A1.pdf . In its decision, the FCC said that Corderman's application for his new call sign was valid and the call sign was "properly granted" by the FCC.

On December 22, 2006, Winfield Brantley of Myrtle Beach, South Carolina, surrendered his call sign — W3ZD — when the FCC approved his application for a new call sign. On December 10, 2008, Allan Corderman, WB1EFN, of New Orleans, Louisiana, applied for W3ZD, stating he was a close relative of a former holder of the call sign. Section 97.19(c)(3) of the FCC rules regarding vanity call signs state that while a surrendered call sign is not available to the vanity call sign system for two years, certain relatives of the deceased former holder or clubs (in certain circumstances) may apply for the call sign in the two year "grace period" http://edocket.access.gpo.gov/cfr_2002/octqtr/pdf/47cfr97.19.pdf . Corderman stated in his application that he was the son of Roy C. Corderman, now deceased, and a former holder of W3ZD.

In January 2009, Richard Essen, N6CX (ex-AB3IQ), of Silver Spring, Maryland, petitioned the FCC, asking that the Commission reconsider Corderman's application for W3ZD, saying that the application should not have been granted because the exception in the vanity call sign system's rules apply only to close survivors of the most recent person to hold the call sign, and not to close relatives of any deceased prior holder.

The FCC disagreed with Essen's petition, saying that "[w]hen the Commission adopted Section 97.19(c)(3), it stated that it was granting priority to 'close relatives of deceased holders,' and did not say that the priority applied only to close relatives of certain deceased holders. The rule has always been interpreted to afford priority to close relatives of any deceased former holder."

According to Section 97.19(c)(3), "Except for an applicant who is the spouse, child, grandchild, stepchild, parent, grandparent, stepparent, brother, sister, stepbrother, stepsister, aunt, uncle, niece, nephew, or in-law, and except for an applicant who is a club station license trustee acting

with the written consent of at least one relative, as listed above, of a person now deceased, the call sign shown on the license of [a] person now deceased is not available to the vanity call

sign system for 2 years following the person's death, or for 2 years following the expiration of the license grant, whichever is sooner."

All Analog, All the Time— by Jim Delmonico, Engineer, General Electric, Skaneateles, New York (from EDN, December 5, 2008, p. 64):

I was a rookie engineer fresh out of college in the late 1980s. I had enjoyed long hours building analog-electronic projects as a hobby and thought that the digital world would be so much easier than analog electronics. After all, computer signals were all ones and zeros. My first assignment was to write diagnostic software for a new RISC workstation. I relished the freedom from pesky analog signals as I rolled out diagnostic programs for the system. The project's hardware guru designed the SDRAM-interface ASIC and helped out with an optional cache-RAM module. He assigned me the cache-RAM diagnostic.

I did my best to write a bulletproof diagnostic. The optional cache-RAM module attached to the motherboard in a piggyback style using four dense, low-profile, high-speed connectors. The module's designer had allocated a good number of the connector pins to ground and power to feed the power-hungry synchronous-static-RAM chips. The diagnostic found all manufacturing-yield problems, and I was proud of myself.

Soon, though, some systems with the cache-RAM modules installed would fail intermittently when the system was running a real operating system. These infrequent failures were impossible to track down with a logic analyzer because the cache's 128-bit-wide data bus had 24 bits of address and several clocks. I did not have the equipment to instrument that much cache capacity.

I humbly requested advice from the guru. He asked whether I had looked at any of the signals with an oscilloscope. Then, he smiled and led me to the laboratory. He probed a few data and address lines at the CPU and cache RAMs and left the scope on infinite-persistence mode as he booted the system several times. He showed me some odd outliers in the scope's eye patterns. Then, he told me to repeat the boot but to hold one scope probe on any cache RAM's ground pin.

The ground potential on the cache module intermittently differed from ground on the motherboard. He then lectured me on how everything, even digital circuitry, is analog. He instructed me to add a diagnostic test that alternated writing and then reading back all ones and all zeros to sequential cache locations.

A significant amount of current was alternately flowing into the cache module from the power supply when the data bus was charging to logic one and then returning through ground when discharging the data bus to logic zero. The cache RAM's drivers were exhausting the local power-decoupling capacitance on the cache-RAM module when charging the wide cache-data bus. In addition, the ground path between the cache module and the motherboard had too much impedance to handle the current flow between the boards. This situation intermittently caused the logic levels at the CPU to miss the specified voltage specification for logic low, logic high, or both, causing data corruption.

The guru said that the module suffered from ground bounce. I was dumbfounded. He added more decoupling and bulk capacitance to the cache module and directed the designer to add a dedicated ground plane on the cache-RAM module's PCB (printed-circuit board) to reduce ground impedance. These changes fixed the problem.

I learned a lot on that day and have had the opportunity to give the same lesson to many young engineers, who were equally shocked when they, too, learned that everything is analog.

West Valley Amateur Radio Association

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